

REMARKS/ARGUMENTS

Claims 1, 6, 7, 11, 13, 14, 17 and 18 have been amended. Claims 21 to 37 have been added. The remainder of the claims are unchanged. Claims 1-20 are currently pending in the application. No admission or representation is made by the present amendments/argument other than that explicitly provided herein.

The Examiner has rejected claims 1-4, 8-13, 15-17 and 20 under 35 U.S.C. 102(e) as being anticipated by U.S. Patent App. Pub. No. 2003/0073408 (Harrel et al.) and claims 5-7 and under 35 U.S.C. 103 as being unpatentable over Harrel et al. in view of U.S. Patent No. 7,050,592 (Iseberg et al.) Clarifying amendments have been made to claims 1, 6, 7, 11, 13, 14, 17 and 18. The Applicant respectfully submits that the subject matter defined by the amended claims is both new and non-obvious in view of the cited references for reasons set forth below. Reconsideration and withdrawal of these rejections is requested for the following reasons.

Harrel describes a time-based audio verification system used to verify the correct installation of an audio system in a vehicle. A pickup microphone is positioned within the car. A test system using a local RF communication subsystem is used to transmit test radio signals to the radio or other RF-enabled audio generating component in the vehicle. The microphone outputs a signal which is sent to a digital signal processor (DSP) and from the DSP to a computer where it is analysed.

The "acoustic device" under test in Harrel is the speakers of the vehicle whereas the acoustic device of the claims comprises a microprocessor, device microphone, and an **auxiliary output device** in addition to a device speaker, each of these components being coupled to the microprocessor of the acoustic device. These features are not found in Harrel since the acoustic device under test is a set of installed car speakers. Even if the "acoustic device" of Harrel is considered to be the entire car stereo system, it still does not have these features. The Examiner points to the output signal 34 at paragraph 30 as describing an auxiliary output device, however these features are not equivalent. The output signal in Harrel is the output from the external microphone positioned within the vehicle. In the claimed invention, the auxiliary output device is

part of the acoustic device and is a separate output of acoustic device, not the primary output (i.e., the microphone cord in Harrel). The above-described differences between the acoustic device in the claimed invention and that in Harrel result in further distinctions in the claims, as explained below.

Independent claim 1 recites a method of acoustical testing in which an electrical audio signal is produced (step a) and provided as an input to an **external speaker** which outputs an acoustic audio signal representation of the electric audio signal (step b). This does not occur in Harrel. In Harrell, the RF communication subsystem is used to transmit test radio signals to the radio. The radio signal is then sent to the vehicle speakers (i.e., the acoustic device under test) rather than an **external speaker** as in claim 1. Thus, step (b) does not occur in Harrel.

Next, claim 1 provides that the acoustic audio signal is then provided as an input to the **device microphone** which outputs a further electric audio signal representation thereof (step c) which is routed using the microprocessor from the **device microphone** to the auxiliary output device from which the electric audio signal is outputted (step d). The further electric audio signal is then outputted from the **auxiliary output device** and analyzed (step e). This does not occur in Harrel as the microphone in Harrel is external to the acoustic device under test, i.e., the speaker(s) 16. Furthermore, as noted above there is no microprocessor or auxiliary output device in Harrel, therefore the output of the microphone cannot be routed to an auxiliary output device or output therefrom. Thus, steps (c), (d) and (e) do not occur in Harrel.

An advantage offered by the claimed invention is that an auxiliary output device (for example a serial data port) can be used for purposes other than testing an audio signal and then configured in a test configuration to output an electrical audio test signal. Thus, the auxiliary output device need not be a dedicated output used solely for outputting audio signals as is typically required with acoustic devices under test.

Given that the acoustic device in Harrel is a set of installed car speakers, Harrel is more analogous to the speaker testing method of independent claim 14 rather than the microphone testing method of independent claim 1. However, Harrel is similarly

lacking in respect of the subject matter of claim 14 in that the acoustic device in Harrel does not include a microprocessor and an **auxiliary input device** as in claim 14. Although the Examiner points to the harness 18 connecting the radio 14 to the speaker(s) 16, these features are not equivalent. The differences between the acoustic device in the claim 14 and that in Harrel result in distinctions in the method of claim 14 similar to those described above in relation to independent claim 1.

Similar to claim 1, the method of claim 14 provides an advantage in that the auxiliary input device need not be a dedicated connection for receiving electric audio signals, but rather can be configured for such a purpose when in a test mode when the claimed test method is applied.

As set forth in the foregoing discussion, many of the claimed features of independent method claims 1 and 14 are not found in Harrel, nor is there any teaching or suggestion that would lead a skilled person to arrive at these features. Accordingly, it is respectfully submitted that independent claims 1 and 14 are directed to both new and non-obvious subject matter in view of Harrel.

The Examiner also refers to Iseberg. Iseberg describes a hearing test apparatus and method which involves the placement of a testing probe in the ear canal of a test subject. The device does not describe an auxiliary output/input device, nor does it describe a method for audio testing an acoustic device. Thus, the claimed invention cannot be arrived at by combining Harrell with Iseberg as both fail to describe or teach or suggest, alone or in combination, an acoustic device having an auxiliary output/input device nor a method for audio testing such an acoustic device.

Furthermore, Iseberg does not relate to testing an acoustic device but rather the hearing of patient and so is in a completely different technical field. Thus, a skilled person would not even consider combining Iseberg with Harrell, or Iseberg with any other reference when attempting to solve problems in relation to methods for audio testing an acoustic device.

In sum, none of the cited prior art references disclose, nor teach nor suggest a method for audio testing an acoustic device having a microprocessor to which is

coupled a device microphone, a speaker and an auxiliary output device. Moreover, none of the references, suggest a method in which an electric audio test signal is routed from the device microphone to an auxiliary output device from which the electric audio signal is then output for analysis. Thus, the subject matter of independent claim 1 is considered to be both new and non-obvious view of the cited references.

Similarly, none of the cited prior art references disclose, nor teach nor suggest a method of testing the audio performance of an acoustic device having a device speaker and an auxiliary input device (rather than an auxiliary output device as in claim 1) coupled to a microprocessor, or a method in which a speaker test electric audio signal is routed from the auxiliary input device to the device speaker. Thus, claim 14 is also considered to be both new and non-obvious view of the cited references.

Claims 2-13 and 15-20 depend directly or indirectly from independent claims 1 or 14 which are each considered to be directed to patentable subject matter. Accordingly, claims 2-13 and 15-20 are considered to be directed to patentable subject matter for at least the same reasons as the claims from which they depend.

The Applicant has considered the other references made of record by the Examiner and notes that these references similar fail to disclose, or teach or suggest in combination, an acoustic device having auxiliary output/input device, or a method in which an electric audio test signal is routed to/from such an auxiliary output/input device.

Claims 21 to 37 have been added to more fully claim the subject matter of the application.

Favourable reconsideration and allowance of the application are respectfully requested. Should the Examiner have any questions in connection with the Applicant's submissions, please contact the undersigned.

Respectfully submitted,

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